

Application No. 10/502,272
Amdt. Dated: February 28, 2006
Reply to Office Action Dated: December 30, 2005
Customer No.: 38107

REMARKS/ARGUMENTS

Claims 1-4 and 6-19 are pending in the present application.

- Claims 1, 3, 4, 8, 9 and 10 stand rejected under 35 U.S.C. 112, second paragraph.
- Claim 7 stands rejected under 35 U.S.C. 112, first paragraph.
- The drawing are objected to as not showing certain features in claim 6.
- Claims 1-4 and 8-10 stand rejected as anticipated by Johnson.
- Claim 5 stands rejected as obvious over Johnson in view of Leask.
- Claims 11 through 19 are new.

The Examiner is thanked for the indication that claim 6 is directed to allowable subject matter.

Rejections Under 35 U.S.C. 112, Second Paragraph

Claims 1, 3, 4, and 10 have been amended to remove the phrases "preferably," "in particular," and "such as" as requested by the Examiner.

The Office Action states that claims 1, 8, and 9 are confusing because they recite wall elements which "consist wholly or partially of a mixture of a material which is flowable in the processing state and an absorption material absorbing electromagnetic radiation." These claims, as well as claim 6, have been amended to state that the walls include the cited mixture.

It is submitted that these changes address the rejections under 35 U.S.C. 112, second paragraph.

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Rejection Under 35 U.S.C. 112, First Paragraph

According to the Office Action, and in relation to claim 7, the disclosure fails to teach how the device functions if most of the x-rays are absorbed by the lamellae of an absorbent material.

The grid preferentially allows passage of unscattered (primary) radiation while preferentially absorbing scattered (secondary) radiation. The Examiner's attention is directed to Figure 1 and paragraphs 22 and 23 of the corresponding U.S. patent publication. As stated therein, the basic structure of Figure 1 is repeated in an alternating sequence 1-2-1-2 of wall elements 1 and lamellae 2. Webs 3 are oriented generally toward the radiation source Q. The webs 3, together with the base 4 and the lamellae 2, form transmission channels through which (primary) radiation coming from the x-ray source Q may pass substantially unhindered. On the other hand, there is a high probability that scattered (secondary) radiation not coming directly from the radiation source Q will hit a web 3, a base 4, or a lamellae 2 and be absorbed there.

Accordingly, it is submitted that claim 7 is supported as required under 35 U.S.C., first paragraph. As there are no other outstanding rejections applicable to claim 7, it is submitted that claim 7 is directed to allowable subject matter.

Drawings

The office action states that "the webs are connected from one side of the foil to the other through the perforation holes" as recited in claim 6 must be shown in the drawings.

In this regard, the Examiner's attention is directed to Figures 1 and 2 of the application as filed. As shown in figure 2, the base 4 includes a plurality of holes 6. With reference to Figure 1, the webs 3 are shown connected from one side of the base 4 to the other through the holes 6.¹ As the webs are connected through and thus obscure

¹ Note that, in an alternate embodiment discussed more fully in the application as filed, the structure 1 may also be fabricated by loading the mixture material into a desired mold.

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the holes in Figure 1, it is impractical to show them. The holes 6 are, however, well illustrated in Figure 2.

Accordingly, it is submitted that the features of claim 6 would be well understood by one skilled in the art and are thus adequately shown in the drawings.

Claim Rejections – 35 U.S.C. 102

Claims 1-4 and 8-10 stand rejected as anticipated by Johnson.

Claims 1, 8, and 9 have been amended to incorporate the requirements of former dependent claim 5, and now require, *inter alia*, that the wall elements exhibit a double comb structure with webs extending on two sides from a base surface.

In regard to the former claim 5, the Office Action suggest that it would be obvious to apply Leask's teaching to Johnson to enable modularity of a grid which is easy to fabricate and assemble. This rejection is respectfully traversed.

Johnson is directed to a flexible anti-scatter grid which can be bent or flexed to change an effective focal length of the grid.² Johnson also teaches that, by injection molding the grid from the thermoplastic material, labor intensive manufacturing techniques which require the assembly of various pieces can be avoided, and a relatively stronger grid may be produced.³

In contrast, Leask is directed to a collimator which is assembled from a plurality of rigid modules which are cast from materials such as powdered metal, lead filled epoxies, or the like.⁴ The modules are press-fit (and potentially cemented) together so as to form a rigid collimator structure as shown in Leask Figure 3.⁵

It is submitted that there is no motivation or suggest to combine the references as suggested by the Office Action. A primary objective of Johnson is to provide a grid

² See, e.g., Johnson col. 2:5-12; col. 3:54-59; col. 4:23-50.

³ See Johnson col. 2:15-18; col. 4:51-53.

⁴ Leask col. 3:20-25.

⁵ Leask col. 3:59 – col. 4:2.

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which can be mechanically bent or flexed so as to change the focal length. Leask, on the other hand, is directed to a mechanically rigid device. Moreover, press fitting (or possibly cementing) a plurality modules as taught by Leask would be especially problematic in a flexible device as the large number of joints would need to withstand the requisite flexing without failure. Accordingly, it is submitted that there would be no suggestion or motivation to combine the references.

Moreover, another of Johnson's objective is to simplify the manufacturing process by minimizing or eliminating the number of pieces to be assembled. The modularity espoused by Leask is contrary to this objective.

Claim 10 has been amended in include the limitations of former dependent claim 6, which was previously indicated as being directed to allowable subject matter. As more fully recited therein, claims 10 now requires a double comb structure and a base which takes the form of an absorbent foil provided with perforation holes. The webs are connected from one side of the foil to the other through the perforation holes.

New dependent **claim 12 and 17** likewise include the limitations of dependent claim 6.

New dependent **claim 11 and 16** include the limitations of dependent claim 7. Note that claim 7 was not previously rejected on prior art grounds; the rejection under 35 U.S.C. 112, first paragraph is discussed above. As more fully recited therein, claims 11 and 16 now require a double comb structure and radiation absorbent lamellae, with the wall elements arranged alternately with the lamellae.

As discussed above, it is submitted that claims 1, 8-10, 11, 12, 16, and 17 are now in condition for allowance. It is also submitted that dependent **claims 2-4 and 7** (which has been amended to depend from claim 1) are likewise allowable at least by virtue of their dependence from their respective base claims. New claims 13-15 and 18-19 are likewise allowable at least by virtue of their dependence from their respective base claims. Claim 6 was previously indicated to be directed to allowable subject matter.

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Note that certain amendments as to form have been made to claims 1, 2, 3, 4, and 7. The amendments do not substantively alter the scope of the claims.

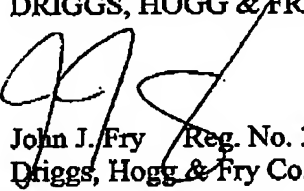
Claim Rejections – 35 U.S.C. 103

Claim 5 stands rejected as obvious over Johnson in view of Leask. As discussed above, the requirements of claim 5 have been incorporated in claim 1. Claim 5 has been cancelled.

Conclusion

In view of the foregoing, it is submitted that claims 1-4 and 6-19 distinguish patentably an non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,
DRIGGS, HOGG & FRY CO., L.P.A.



John J. Fry Reg. No. 35,873
Driggs, Hogg & Fry Co., L.P.A.
38500 Chardon Road
Willoughby Hills, Ohio 44094
Phone: 1.440.391.5100
Fax: 1.440.391.5101